

## Birds of Lake Frome District, South Australia

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### Part. I.

The Lake Frome District comprises about six thousand square miles of country. If we take a map of South Australia and draw a line from Farina through the centre of Lake Frome and on to the New South Wales border, this would very nearly represent the middle of the district. If we travel along this line in imagination, we will gain some knowledge of the country. First we start in the high rugged hills of the Flinders Range, then pass over "gibber" (small stones) tablelands, and open plains, till we reach Lake Frome, which is a lake in name only, it being nothing more than a saltpan, and containing water only in its deepest parts after a heavy rainfall. Passing over Lake Frome, we reach the sandhills, a collection of high red sand dunes, running in an east-west direction. We travel through these till we reach the New South Wales border. In the sandhills many small lakes are to be seen, unfortunately usually dry, and containing water for a few months only after rain. Several artesian bores form channels of water several miles long. These are the only permanent waters; in fact, with the exception of a few rock springs and a small area of mud springs in the Flinders Range, the whole district is devoid of permanent natural waters, though water is easily obtained by sinking wells. The district is unfortunately subject to severe droughts. At the time of writing it is eleven months since the last fall of rain.

The average yearly rainfall is 5 inches. To compile a list of birds in this part on a given date would not be fair to the district, for in drought time few birds are to be seen, they having sought better quarters, and in a good season the list would contain many species that visit the locality only at long intervals. The writer, from observations made during a period of 15 years' residence, endeavours to record every species identified during this time. Some of the notes may not agree with observations made in a country with a higher and more regular rainfall, but they tend to show that many birds alter their habits to conform with the conditions ruling in their habitat. It will be noticed that the breeding season is very irregular. In bad years, few birds attempt to breed; in fact, most of them seek better quarters, but, when a break-up of the drought occurs, they return and commence nesting operations at once. The best rains usually fall in the summer months, so that birds which breed in the spring about Adelaide are often found nesting in this district at the end of the summer or in autumn or winter. In good seasons some birds nest practically all the year, and in this way make up for the non-breeding years.

*Dromaius nova-hollandiae*. Emu.—Usually plentiful, except in very bad seasons, when they seek better quarters. Breed freely, preferring same nesting site year after year. Old bleached egg shells often noted with freshly laid eggs. No nest is formed other than that small sticks, stones, etc., that may have been on selected site are worked out in a circle. Clutch varies from 6 to 11 eggs, according to season. Breeding starts in normal years at end of April, and young are plentiful by end of June; does not breed at all in bad years; lives chiefly upon vegetable matter and fruits, which are taken whole, the stones being passed out in their normal state. A quantity of stone and hard objects is swallowed, possibly as an aid of digestion. No record has been made of an Emu having died from eating poisoned meat and pollard baits. Practically no grubs, grasshoppers or insects taken as food. Emus are rather troublesome to fences, and many meet their end through becoming entangled in fencing wires.

*Coturnix pectoralis* (Stubble Quail) and *Synoicus australis* (Brown Quail).—Occur only in good seasons, when both species, more especially the latter, appear in great numbers and inhabit the clover flats and swamps; no record of breeding in district.

*Turnix velox*. Little Quail.—These fine little birds come along in thousands when the season is favourable. Breed in fair numbers; clutch, 4 eggs. Nest a small grass-lined depression in ground under grass tussocks at edge of small swamps, crabholes or almost any situation affording cover. Gives two or three squeaking calls when suddenly flushed.

*Pedionomus torquatus*. Plain-Wanderer.—Very rare, only two having been seen during last three years. A female was captured and presented alive to Capt. S. A. White. No record of breeding.

*Geopelia cuneata*. Diamond Dove.—Common, breeds freely. Nest, a few light twigs used in forming a flat frail platform, which is usually placed in a fork of a low tree, sometimes on the top of an old Babbler's nest, and at other times on debris washed up in bushes in creeks. Clutch invariably 2 eggs, which can generally be seen through bottom of nest. Bird sits close to eggs and young. Both birds feed young. Breeds at any time of year in accordance with season. Its mournful note is often heard during the night, especially in breeding season.

*Phaps chalcoptera*. Bronzewing.—Plentiful, breeds freely. Nest a platform of sticks in a horizontal fork in low, thick bush or on a heap of debris in a tree. The depression for eggs is better defined than it is with the Crested Pigeon. Young birds have adult plumage from nest, but the colour is somewhat pallid in comparison. These fine Pigeons congregate in great numbers at some of the springs. Just at dusk and at daybreak they come and go singly, landing with a thud a little distance from water and walking in. They prefer dark gullies and the shade of thick trees by day. Usual breeding season, August to October, but of course depending on rainfall, still it is more regular than most of the birds. Clutch, 2 eggs.

*Lophophaps plumifera*. Plumed Pigeon.—Only a single specimen noted on "gibber" (stony) tablelands.

*Ocyphaps lophotes*. Crested Pigeon.—Very numerous. The metallic sound made by these birds as they fly in flocks of a hundred or more strong is wonderful. Breed freely; nest a frail platform of sticks placed in fork of tree, upon old nests of almost any of the larger birds or on top of creepers and parasitic growth in low bushes, usually placed within 10 feet of ground, though a record has been made, 14th May, 1919. Saw Crested Pigeon flush from two eggs in nest built inside old Magpie's nest, 24 feet from ground. Clutch is invariably two eggs. Birds sit closely on eggs and young; the young

assume adult plumage before leaving nest, but the coloration is not as bright as in the adult bird. This Pigeon usually deserts nest if eggs are handled, but before doing so will push off any eggs in the nest. The writer has observed them do this on more than one occasion. They do not desert the young when handled. If "an exception proves the rule," I might say that I have taken an incubated set from one bird, but later on found a fresh set, and not wishing to take both, I restored the incubated set to its nest, and the Pigeon which was sitting on nest, when I returned, successfully reared its young.

**Porzana fluminea.** Spotted Crane.—Rarely seen in swamps; no record of breeding. One bird chased by Black Falcon took refuge in house, and is now doing well in captivity.

**Tribonyx ventralis.** Black-tailed Native Hen.—In good seasons it comes along in thousands, and a few birds can generally be noted along bore streams. Breeds occasionally in polygonum swamps; clutch 5 to 7 eggs. Record made, "19th September, 1918. Moolawatana Bore. Thousands of Water Hens disappeared during night, none visible this morning." Heard afterwards that a heavy thunderstorm fell on 17th September, 1918, at a station 60 miles away, and thousands of these birds arrived the day after.

**Porphyrio melanotus** (Swamp-Hen) and **Fulica atra** (Coot).—Rarely seen, remains only a short time. No record of breeding. During a hot summer, 1916, one bird (Swamp Hen), apparently in need of water, came into the fowl yard and continued to live with domestic fowls for several months, and became very quiet, but when rain fell it disappeared.

**Podiceps poliocephalus.** Hoary-headed Grebe.—This is probably the only species of Grebe found in district, certainly it is the only resident. Fairly numerous in good seasons, and odd pairs may be seen at any time on small natural pools of water in hilly country. Breeds freely on swamps in good season and also on small springs. The nest is a compact mass of water-weeds, rushes, etc., attached to reeds, rushes or almost any object standing in water. The nest itself floats on the water; clutch, 3 to 5 eggs. Before leaving nest, the bird drags up a quantity of water-weed, and completely covers the eggs. I have never observed the bird covering herself when sitting on eggs, nor do I think that she does. The eggs are a bluish white, sometimes slightly lime encrusted, when first laid, but from contact with vegetable matter they gradually change to a dark chocolate brown when at point of hatching. Young birds leave the nest as soon as hatched. The young are dusky brown, covered with down with a few grey spots here and there. The flight of this Grebe is very rapid, straight ahead and low. Have often made it fly from small pools. Breeding season of visiting birds takes place when conditions favourable—swamps full of water—but the resident birds usually nest in September to November.

**Chlidonias leucopareia** (Whiskered (Marsh) Tern), **Gelochelidon nilotica** (Gull-billed Tern), and **Hyproprogne caspia** (Caspian Tern).—The two smaller Terns visit the district in fair numbers, but only an occasional Caspian Tern has been noted in good seasons; probably do not breed in district.

**Larus novæ-hollandiæ.** Silver Gull.—A few Gulls noted every good season. One bird was feeding with domestic fowls on 28th February, 1919, a very hot and dry time; stayed only a few hours. A young bird in down just able to fly captured alive at bore stream. Possibly reared in district. No record of its breeding in locality.

**Erythrogonys cinctus.** Red-kneed Dotterel.—A few birds generally found along bore streams, and a great increase in number takes place

in good seasons. Breeds on small islets in swamps and along bore streams; nest a slight depression in sand, usually scantily lined with short pieces of dry herbage and invariably placed under a bush; clutch, 4 eggs. Whereas Red-capped and Black-fronted Dotterels are usually found in pairs, this species is usually in fair-sized companies.

*Lebix novæ-hollandiæ*. Spur-winged Plover.—A few pairs always along bore streams; nests on small islets in stream, making a slight depression in ground. This is usually lined with short pieces of sapphire, saltbush and grass, and a few pieces of dried earth are placed round depression. Eggs, 4 in number, placed with pointed ends to centre of depression. Breeds in August and September. Apparently visitors even in good seasons.

*Zonifer tricolor*. Black-breasted Plover.—Nomadic, appearing only when grubs or grasshoppers are about. Nests freely. Eggs, four in number, placed points in centre in a depression in ground; a slight lining of small twigs and grass in depression usually surrounded by several pieces of horse manure. Breeds at any time when conditions favourable. Resorts to the usual decoying antics to lead one from its nest. Have seen a bullock tread upon the wing of one bird that fluttered about to protect its nest. The wing was broken, but this did not prevent the bird from returning to its four "chipping" eggs.

*Charadrius ruficapillus*. Red-capped Dotterel.—Resident along bore streams and springs; numbers largely increasing in good seasons, when it breeds freely, laying its usual complement of two eggs in a small depression, no lining, on open ground on a small islet. Occasionally nests may be found as far away as a mile from water; in these cases the nest is usually formed close to a bush. Young birds leave the nest as soon as hatched, and apparently need no instructions in the way of disappearing from one's sight. They are curiously mottled, downy objects, and when crouched down look like a hairy caterpillar curled up; they resort to the well-known tricks to lead danger from nest and eggs and the young, but only if suddenly flushed.

*Charadrius melanops*. Black-fronted Dotterel.—Found in pairs along bore streams and at springs—in good years, however, their numbers largely increased. Breeds freely, laying two or three eggs in a slight depression in ground, usually close to edge of water and rarely on islets. The depression is generally lined at bottom with small, short, dry twigs. When available a stone-strewed patch of sand is selected as a nesting site, and the eggs are then hard to locate, especially as the bird keeps a good look out for danger and leaves the nest quietly. If suddenly flushed direct from nest it pretends the broken-winged tricks to perfection. In good seasons this bird nests at almost any time, but in normal years during October to December.

*Peltohyas australis*. Australian Dotterel.—The writer has fully dealt with this bird in the "S.A. Ornithologist," vol. v., part 2, April, 1920. The only additional note is that although the writer has not observed this fine bird watering at stock tanks or troughs during the hot summer months, when there was no surface water, his brother (L. K. McGilp) records that upon an evening early in January, when camped at a stock tank, he saw hundreds of Dotterels come to water just at dusk.

*Himantopus leucocephalus*. White-headed Stilt.—Rare visitors, remaining only a few weeks, usually in summer months. No record of breeding.

*Recurvirostra novæ-hollandiæ*. Red-necked Avocet.—A few always present along bore streams and at mud springs. When lakes are full, thousands of them come along and commence breeding operations im-

mediately. In May, 1918, thousands of young were reared; clutch, 4 eggs, placed in a bare depression, rarely lined, in damp mud of islets. Nesting in colonies, nests being close together. When disturbed they give forth their loud barking call so energetically that one cannot hear another speak. The young leave nest as soon as hatched, and are curious balls of light-coloured, mottled down. It is a pretty sight to see the parents with the young chicks wading along water's edge, the young look like Red-capped Dotterels from a short distance. Parents make no attempt to protect the nest other than flying overhead "barking" continuously. Eggs are placed with points to centre of nest.

*Pisobia acuminata*. Sharp-tailed Stint.—In February, 1918, some of the deeper parts of Lake Frome held flood waters. Thousands of Swans, Ducks, small Dotterels, Avocets soon gathered there. On May 18th thousands of these Stints were first reported to me. I visited the lake and found much of interest, as this was my first introduction to the bird in its natural state. Truly, they were in thousands, but were divided up in flocks of fully 500 strong. When disturbed, I was astounded to watch the perfect "company" flying of each flock; they twisted and turned as one bird, and all settled practically as one mass in the water. I discharged shot after shot to disturb them, and each time their evolutions were wonderful. None remained by 10th July. This is the only record for district, as it was also a record so far as water to any extent being in Lake Frome during my residence at Moolawatana.

*Stiltia isabella*. Australian Pratincole.—Locally known as "Spear-wing" on account of its pointed wings. Visit locality in large numbers in good seasons only. Breeds occasionally, laying 2 eggs only—small ends together, on bare ground, no depression formed. If a stone-strewn spot is chosen as a nesting site, the stones are scratched out in circle, but more often a hard, bare clay patch is chosen. Young leave nest as soon as hatched, and when approached either crouch down in herbage or in small cracks in ground and even down rabbit burrows. Birds sit closely to eggs, and when disturbed pretend injury, but will quickly return to nest or young. On account of protective coloration, they are hard to see until their bobbing action calls one's attention. When not nesting they are very wary, and easily take to flight, which is a peculiar "side-slipping" action. The call is a plaintive whistle. These birds may be seen watering at stock tanks at any time during the day.

*Burhinus magnirostris*. Southern Stone-Plover.—Fairly plentiful in ranges, but rarely seen or heard on the plains and sand hills. Breeds in September and October, two eggs being deposited on bare ground at the foot of a small shrubby bush. Bird sneaks quietly from nest and remains close at hand.

*Eupodotis australis*. Bustards or Wild Turkey.—When a good season gives an ample supply of food in the shape of grubs and grasshoppers, these birds appear in numbers, but they leave to follow the food supply. For many years none nested in district, though about ten years ago several nests with the single egg were noted. The egg is laid on bare ground close to a shrub, and invariably rising ground is chosen for the nesting site. The old male birds are the last to arrive and the last to leave the district. When danger is near, the female, which does the incubating, will often crouch down on its nest, but directly one stops near the nest, she sneaks a few yards and then rises. If one continues straight on she will remain on nest.

*Antigone rubicunda*. Broilga (Native Companion).—Small parties come along in good seasons when lakes are full; others are often seen passing over district flying at a great height. Only once saw a party of 23 birds dancing on a flat near a bore stream. One record of a

nest in district. On a small islet in Teatree Lake a large nest was placed on the ground between cane-grass; it was a flat mass of sticks and grass, some of the latter being quite green. Two Brolgas were close at hand, and appeared very nervous, but did not leave the vicinity. The nest resembled a Swan's nest, but was built of finer materials. A few days afterwards a thunderstorm filled the lake, covering the island with water, and the birds disappeared. Date, May 29th, 1918.

*Threskiornis molucca* (White Ibis) and *Threskiornis spinicollis* (Straw-necked Ibis).—Visitors in good seasons. Very few of the former species, but large numbers of the Straw-necks. The White Ibis prefers to remain about swamps and creeks containing water, but the other species spends most of its time feeding on flats, seeking after grubs, many of which they secure from out of the ground by probing down with their long bills. The Straw-necked Ibis is indeed a very valuable bird.

*Plegadis falcinellus*. Glossy Ibis.—A rare visitor for short periods only. In the summer of 1912 one bird walked into the house at an out station; it was almost exhausted from want of water and the extreme heat. It remained for quite six months, during which time it became so tame that it allowed itself to be caught. It was amusing to see it and a kitten playing together. It did not seem to relish the usual scraps thrown out from the hut, but preferred to secure its own food. Every morning, it paraded a wire fence a few yards in front of the house, at every post it would poke its bill into the wire holes within reach and in this way secured a great many spiders, etc. It disappeared one night in May or June.

*Platalea regia* (Black-billed Spoonbill) and *Platalea flavipes* (Yellow-billed Spoonbill).—A few of the former and a fair number of the latter occasionally call in for a short period during good seasons. It is amusing to watch both species fishing; they wade along in shallow water with their long spoon-like bill right down in the water, the bill is worked from side to side as the bird walks along. No record of breeding.

*Egretta* (species ?).—In July, 1918, several white Egrets were seen on a fresh-water lake. No specimen was taken for identification. It was possibly the Plumed Egret. They remained only for a week or two. No other record.

*Notophox novæ-hollandiæ*. White-faced (-fronted) Heron.—Fairly common in good seasons. Breeding now and again in gums, the usual stick nest; clutch, 3 eggs. Odd pairs remain in hills, around permanent springs.

*Notophox pacifica*. White-necked Heron.—Very numerous in good seasons, and they prefer to spread over the district on small crab-holes and claypans. No record of breeding.

*Nycticorax caledonicus*. Nankeen Night Heron.—Usually a few birds in box trees along bore streams, numbers largely increased in good seasons. Birds in immature plumage also plentiful, but I doubt if these Night Herons breed in district. Have not seen plumes on any adult birds.

*Chenopsis atrata*. Black Swan.—Visits the district in large numbers when lakes are full, immediately starts breeding, building its nest of small branches of trees, bushes, leaves and down from its own breast. Nests are sometimes within a yard or two of one another. In May, 1918, hundreds upon hundreds nested on islands in deeper parts of Lake Frome. The clutch varied from 4 to 7 eggs. A small band of aboriginals camped on edge of water, and until my visit were living upon the young and eggs of the Swan. I threatened to stop their rations from the Government, and I also called on them the next

night with the remains of a bag of bait, which I scattered close to their camp in the dark. The following day they cleared out, and the birds were left to rear their young. The aborigines claim that the Swan will continue to lay eggs so long as they are removed from the nest as long as the water lasted in the lake. I would not vouch for this. I camped about a mile from the island, and just after sunrise something disturbed the Swans from the water; the roar made by their wings striking the water, in their clumsy effort in rising resembled the roar of a heavy sea, a rushing gale of wind, or an express train some distance away.

*Anseranas semipalmata*. Pied Goose.—A party of eleven is the only record; seen on stock tank for one day only; disappeared during night.

*Anas supercilliosa*. Grey (Black) Duck.—Common in good seasons, generally a few residents on stock tanks, bores, etc. Breeds freely; nest made of a few thin twigs and leaves in a depression under samphire, polygonum, on islands in lakes. No hollow trees in vicinity. Breeding season after first rainfall in year sufficient to fill lakes. A few resident birds nest in reeds and rushes of permanent springs; these nest in September or October. Clutch from 6 to 8 eggs; eggs in nest usually partly covered with down.

*Chenonetta jubata*, Maned Goose; *Dendrocygna eytoni*, † Plumed Whistling Duck; *Virago castanea*, \* Chestnut-breasted Teal; *Virago gibberifrons*, Grey Teal; *Spatula rhynchotis*, † Blue-winged Shoveller; *Malacorhynchus membranaceus*, Pink-eared Duck; *Stictonetta naevosa*, \* Freckled Duck; *Nyroca australis*, White-eyed Duck; *Oxyura australis*, \* Blue-billed Duck; *Tadorna tadornoides*, Chestnut-breasted Shelduck (Mountain Duck).

All these Ducks have been identified at one time or another. Those marked \* recorded for first time in May, 1918, have not appeared since; 1918 was a record year for rainfall, and all the small lakes were filled. Those marked † are rarely seen except in good seasons. All the others appear in great numbers in suitable conditions, and also in small numbers on stock tanks, springs and bore streams. Very few indications of breeding have been noted; the waters are not suitable, as they have few large trees and little polygonum near them. Young of the Mountain Duck, Grey Teal and Pink-eared Ducks have been noted on several occasions, and those of the Wood Duck once only. These were all unable to fly, and prove that these Ducks breed in the district. In good seasons the waters teem with Ducks and Water Fowl of all descriptions, but when a dry period arrives few remain. The Wood Duck has appeared in smaller numbers of late years, but in May of this year I was surprised to see them in hundreds on waters just south of this district. I had never seen so many together before.

The Chestnut-breasted Teal is quite a distinct species from the Grey Teal, and I have only one record of a specimen on Wattakilla Lake on May 11th, 1918. There were a few with thousands of other species of Ducks on the water.

*Biziura lobata*. Musk-Duck.—Not plentiful, except in year 1918. Have no record of its nesting in district. Single birds, usually males, often seen in stock tanks. They fly away during night. Have never been able to make it rise in daytime, though have often caught one in shallow tanks with the help of wire netting; one particular bird I carried home alive a distance of six miles. It did not attempt to fly out of trap, though it was free to do so. I put it in a 10,000 gallon iron tank, the water being only within 3 feet of top. It remained there, diving and swimming round until nightfall, but next morning our "smelly" pet had gone. It could not have climbed out, as the sides of tank were of plain sheet steel.

(To be Continued.)